

# WATERSHED Update MANAGEMENT

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*This* newsletter is published by the Montana Department of Environmental Quality (DEQ) in an effort to share information with local watershed planning groups. Local groups are encouraged to share their success stories with others working in Montana to improve and protect water quality. To publish an article in the newsletter contact Roxann Lincoln at (406) 444-7423.



*Clark Fork River near Superior, Montana*

## DEQ to Hold Public Meetings

DEQ expects to finish the sufficient credible data reviews for streams on the state 303(d) list as required by statute by the end of January. Streams that did not meet the sufficient credible data requirement will not be listed on the state's 2000 list. However, these streams will be reassessed by DEQ staff as soon as practical. A schedule for reassessment will be presented at the public meetings.

The state's 303(d) list must be submitted to EPA for approval in April 2000. Prior to submittal of the list, the department will be holding a 60-day public comment period and has planned 17 public meetings across the state. Meetings are planned in the following

locations: Missoula, Kalispell, Deer Lodge, Libby, Thompson Falls, Dillon, Whitehall/ Divide, Great Falls, Helena, Shelby, Havre, Lewistown, Glasgow, Livingston, Billings, Miles City, and Sidney.

For more information concerning the exact date, location and time of the meetings, please visit our website at [www.deq.state.mt.us/ppa](http://www.deq.state.mt.us/ppa).

## DEQ Wins 2 Out of 3 Counts in TMDL Lawsuit

Five Montana-based environmental groups – *Friends of the Wild Swan, American Wildlands, Montana Environmental Information Center, The Ecology Center, and the Alliance for the Wild Rockies* – challenged the adequacy of the state's TMDL endeavors and filed suit on February 28, 1997. On November 8, 1999 U.S. District Judge Donald Malloy ruled on the case.

**Count 1** – Plaintiffs contend EPA breached a mandatory duty to identify Montana's WQLSs and develop corresponding TMDLs.

A lasting, effective approach will arise only out of a sense of shared responsibility.

This will happen only when we finally quit pounding the table and sit down at it, agree to set aside our egos and collective paranoia and get something done.

by Stan Bradshaw  
Trout Unlimited

The judge ruled:

- i) DEQ did not “constructively submit” that no water quality limited segments (WQLSs) exist and no TMDLs are necessary by failing to submit lists to EPA from 1979 to 1992 because DEQ did submit 303(d) lists in 1992, 1994, and 1996, in which WQLSs and TMDLs were identified; and
- ii) The EPA does not have an “affirmative duty” to prepare a complete list of WQLSs or TMDLs for Montana, as the EPA’s duties are limited to: a) approving or disapproving the state’s list within 30 days, and b) identifying appropriate WQLSs and developing TMDLs upon disapproval of a state’ list.

**Count 2** – Plaintiffs allege the EPA’s failure to identify Montana’s WQLSs and develop TMDLs constitutes “agency action unlawfully withheld or unreasonably delayed.”

The judge ruled:

- i) EPA’s failure to identify Montana’s WQLSs and develop corresponding TMDLs does not constitute “agency action unlawfully withheld or unreasonably delayed” due to EPA approval of 1992, 1994 and 1996 303(d) lists.

**Count 3** (6 parts) – Plaintiffs want a declaration that EPA’s approval of Montana’s 1998 submission of WQLSs and TMDLs was arbitrary and capricious because the approved submission was deficient in six respects.

The judge ruled:

- i) DEQ’s 1998 list was not inadequate because it failed to identify all WQLSs; states are not required to assess all waterbodies prior to WQLS list submission; instead only “existing and readily available data and information” are required to develop WQLS lists under the Clean Water Act;
- ii) Montana did provide an adequate rational explanation for not adding 83 waterbodies to the 1998 303(d) list; the plaintiffs provided DEQ with data on these waterbodies and DEQ did not list these streams due to the absence of location information and reference condition information provided;
- iii) Non-point source pollution impacts on native fisheries were adequately considered in the waterbody prioritization process, as several cold water fishery-impacted streams were listed as high priorities on the 1998 list;

- iv) DEQ did adequately respond to public comments on the 1998 303(d) list;
- v) The 129 point discharge TMDLs identified in the 1998 303(d) list do qualify as TMDLs in accordance with all components of the Clean Water Act definition; and
- vi) Montana’s submission of 130 TMDLs in 1998 fails to meet the Clean Water Act’s requirement that states promptly develop TMDLs for the WQLSs they identify.

As a result of the later finding (item vi), the court has ordered both parties to submit briefs within 15 days which describe the appropriate remedy for the Count 3 (item vi) violation of the Clean Water Act.

DEQ is pleased with the court ruling in which the department and EPA won on counts 1, 2, and 5 parts of count 3.

## River Friendly Farmers Recognized in Indiana

*from CTIC Vol. 17 No.4*

This new statewide initiative recognizes farmers who protect and enhance Indiana’s rivers, lakes and streams. Management practices that prevent soil erosion and polluted runoff must be used by a farmer. Applicants are reviewed by local committees. River Friendly Farmers who are recognized publicly, receive a *River Friendly Farmer* sign and jacket. The program is a coordinated effort between the Indiana Association of Soil and Water Conservation Districts, the Office of the Commissioner of Agriculture and the Indiana Farm Bureau.

For more information contact Debbie Fairhurst of the Indiana Soil and Water Conservation Districts at (317) 692-7519.

## Sun River Watershed Project

The Sun River Watershed Project is a group of local citizens, landowners and agency personnel interested in water quality and quantity issues in the Sun River watershed.

The goals established by the group are: 1) maintain and/or improve a viable agricultural economy, 2) control noxious weeds, 3) reduce sediment loads into the Sun and Missouri rivers, 4) improve overall water quality of the Sun River, 5) improve instream flows in the Sun River, 6) improve fisheries in the Sun River, and 7) ensure effective subdivision planning.

The project was the co-recipient of the first Montana Watershed Recognition Award. This award was presented by the Montana Watershed Coordination Council in June for exceptional teamwork and positive actions on resolving resource issues. The Big Hole Watershed Committee was the other co-recipient.

The group is working with DEQ to develop a TMDL for the river looking at sediment reductions. They are also in the process of developing a water budget for the basin. The water budget review includes determining the amount of water at various points in the river, and looking at precipitation, groundwater, gaging data and information gaps.

For more information concerning this project contact Alan Rollo (Coordinator) at (406) 727-3603.

## Redwater River Assessment

*by McCone Conservation District*

On May 4, 1999, landowners were provided the opportunity to fly over their reaches of the river in a Bell Jet Ranger helicopter. Later that afternoon GPS (global positioning system) mapping of the river was started, and it finished the next day in spite of the hurricane force winds that blew.

Following the fly over, on May 24, 27 land owners, along with district board members, NRCS staff, and staff from the Department of Natural Resources (DNRC), and Department of Environmental Quality (DEQ) in Helena, met in preparation for the on-the-ground assessment of the river which was to take place over the next two days. As a result of the GPS mapping on 168 miles of the river, eight potential sites for water sampling had been picked, as well as eight sites to do a visual assessment. Slides were shown of the fly over. GPS completed maps were provided for all to view.

The next two days were spent on the ground with the landowners completing visual assessments of the land and water sampling. The landowners provided much needed historical background. The Conservation District stressed that this assessment should only be used as a statement of condition for future use.

The assessment team split into three groups, one doing the south end (from near the headwaters by Sheep Mountain to Dry Ash Creek crossing), one in the middle and one on the north end. It appeared that the Redwater River seemed to be in a much better environmental condition than it was thought it would be. Some invading weed species were noted and this will be noted as a concern in the conservation district's long-term planning. Along the south reach, there was saline evidence on plants and exposed soils, but there was still evidence of extensive use by waterfowl.

Some quality increases of Redwater River were thought to be attributed to the Conservation Reserve Program (CRP). Out of 590,000 acres of cropland in McCone County, approximately 146,000 acres are enrolled in the CRP Program. A very large

percentage of this acreage is also *highly erodible cropland*. It was felt that this cropland in CRP made a positive impact within the watershed. Generally, the native range seemed to be in an upward trend, but management issues seemed to be a concern, i.e. encourage livestock producers to adopt planned grazing systems like alternating the season of use in their pastures.

The final assessment is available through the Conservation District. A BIG THANKS TO THE LANDOWNERS/PRODUCERS WHO PARTICIPATED AND COOPERATED WITH THE CD IN THIS PROJECT!!!!

For more information visit the McCone CD website at <http://mt.nacdnet.org/mccone>.

## Function of Riparian Areas

*From: Montana BLM Riparian Technical Bulletin No. 4, January 1998*

Riparian areas are the Agreen zones at which lie between channels of flowing water and uplands. They are the link between aquatic environments and upland, terrestrial ecosystems. These areas are intimately related to their adjacent waterways since the presence of water for all or part of the growing season is their distinguishing characteristic. Moreover, the nature and condition of the riparian area abutting a stream channel fundamentally affects the aquatic ecosystem.

Healthy riparian areas provide several important ecological functions. These functions include water storage and aquifer recharge, filtering of chemical and organic wastes, sediment trapping, bank building and maintenance, flow energy dissipation, and primary biotic function production.

### 1. Water Storage and Aquifer Recharge

The soil in the banks and floodplains and the substrate under the channel act as a sponge to retain water. In doing so, they reduce peak flows during floods. This stored water is released as subsurface or groundwater over time, extending the availability of water in the watershed for a longer period in the summer and/or recharging the underground aquifer.

### 2. Energy Dissipation and Streambank Stabilization

Riparian vegetation reduces erosion and the introduction of excessive sediment into the channel. Vegetation can also limit the movement of upland soil into the stream. Floodplains serve to reduce water velocity by allowing it to spread across a wider area and providing more obstacles to create friction. These functions are particularly important during spring runoff periods and after major summer or fall rains.

### 3. Sediment Trapping

Trapping of sediment by riparian vegetation may lead to the development of new banks and bars, which become the location for new vegetation communities, further enhancing stability. Sediment retention is also important because excessive sediment loads reduce habitat quality for aquatic life (including fish) and destabilize the natural hydrologic regime of the system. Healthy riparian systems enhance water quality by filtering out organic and chemical pollutants before they reach the channel and as they move downstream.

### 4. Protects Aquatic Habitat

Riparian vegetation shields soil and water from wind, sunlight, and raindrop impact. This reduces erosion due to wind and the disruptive impact of rainfall as well as reducing evaporation. Vegetative canopy cover also provides shade which reduces water temperatures and improves aquatic habitat. Dense vegetation may limit soil compaction through the presence of healthy root systems and by limiting accessibility of both domestic livestock and wild ungulates. Although an increase in vegetation may increase evapotranspiration, in natural riparian systems the overall benefits offset this loss.

### 5. Rich in Biotic Production

The presence of water and essential nutrients make riparian areas among the most productive parts of the landscape, especially in such regions as the semi-arid western United States. This productivity enhances livestock as well. Biomass on mountain meadows, for example, may be "10 to 20 times higher than that of surrounding uplands" (Skovlin 1984). Roath and Krueger (1982) found that the riparian area in a Blue Mountain pasture in eastern Oregon provided more than 80% of the total herbaceous vegetation grazed by cattle, even though it comprised less than 2% of the total area of the pasture.

For information on riparian success stories in Montana see *Your Land Private Landowners and Conservation, Summer 1999* published by NRCS.

## Artesian Wells Statewide Are Drying Up

by Roxann Lincoln

Many farmers and ranchers in central and east-central Montana are becoming concerned about their artesian wells. Artesian wells produce groundwater that flows up from deep within the ground under pressure to the surface.

Recently the pressure in the wells has begun to drop and the flow of the wells has decreased and in some cases ceased

altogether. Locals first began noticing the change in pressure in the mid-1990s. When artesian wells were first installed there was no mechanism to control the flow so many have been flowing for 70 years or more.

Artesian wells are common in Petroleum, Fergus and Judith Basin counties where they are used in homes and to water hay and cattle.

Petroleum County Conservation District teamed up with the Department of Natural Resources and Conservation (DNRC) and the Montana Bureau of Mines and Geology to try and solve the problem. Grant funds were applied for and wells were surveyed over a 2.5 year period. The solution turned out to be fairly simple, install flow control mechanisms on the wells, plug and abandon those not flowing and replace the wells.

Following Petroleum County's lead, Fergus and Judith Basin counties are now addressing this issue. Fergus County has received two grants, one from the DEQ to begin inventorying wells and addressing problems.

## The Forest Service and DNRC Team Up to Improve Henry Creek

by Roxann Lincoln, DEQ

Henry Creek is a tributary to the Clark Fork River that lies between the communities of Plains and Paradise. The Forest Service (FS) and the state Department of Natural Resources and Conservation (DNRC) are the major landowners in the drainage.

Beginning in 1991, the Forest Service started changing grazing management practices on its land to improve the riparian condition of the stream. In 1995 the agencies began working together to improve the health and water quality of the Henry Creek. Some of the activities conducted include reseeded unused roads, installing BMPs on other roads, reconstructing several miles of the Henry Creek road, excluding cattle from certain areas and cross-fencing others in an effort to reduce sediment moving into the stream.

Henry Creek supports an isolated population of westslope cutthroat trout. A culvert at the mouth of the creek prevents fish passage from the Clark Fork River into the stream. Westslope cutthroat trout are a sensitive species warranting special management considerations.

The FS and DNRC are monitoring their activities to ensure the stream improves. Some of the monitoring activities include stream stability assessment, channel cross-sections, particle size counts, percent surface fines, BMP effectiveness monitoring and temperature.

The work at Henry Creek is a good example of two resource agencies (one federal and one state) working together to improve water quality.

## Public Opinion

Source: Robert Starch, July 1999

Three in five Americans say they would be willing to work with their community to set aside land to help protect water.

One in three Americans say they use a filter or distilling device before they drink tap water.

Nearly half (46%) of Americans drink bottled water at home.

Half (51%) of Americans are willing to pay a higher water bill to upgrade water treatment.

## Funding Sources

1. *Watershed Planning and Assistance Grant* is sponsored by DNRC's Conservation District's Bureau. This grant is available to cover watershed coordinator's salary related to projects, developing a watershed plan, educational planning, and start-up costs for new watershed groups. This is not intended for permanent long term funding or implementation of site specific projects. The grant limit is \$10,000 per project. For grant information or criteria visit the website [www.state.mt.us/dnrc/cardd/loangrnt.htm](http://www.state.mt.us/dnrc/cardd/loangrnt.htm) or call Warren Kellogg at (406) 444-4490.
2. The Bonneville Environmental Foundation has grants available to fund watershed restoration ideas. They are looking for people and places where a few dollars, placed with care and expertise, can bridge the gap between idea and reality. Non-profit organizations are welcome to apply as well as local watershed groups and local agencies. Contact their website at [www.BonEnvFdn.org](http://www.BonEnvFdn.org) for criteria and proposal information.
3. USDA's Western Region Sustainable Agriculture Research and Education Program is receiving proposals for grant funds to identify, evaluate, and test sustainable agriculture practices and challenges. Proposals must be lead by one or more producers, include a professional agricultural technical advisor and provide a plan for sharing information with their communities. Applications will be received until 5:00 p.m. on January 17, 2000. To apply contact the host office at Utah State University at (435) 797-2257 or email at [wsare@mendel.usu.edu](mailto:wsare@mendel.usu.edu).

## Conferences

The International Erosion Control Association is sponsoring their 31<sup>st</sup> Annual Conference and Expo. The conference will be held February 21-25, 2000 at the Palm Springs Convention Center in Palm Springs, California.

Topics will include regulations, new techniques, installation guidelines, new strategies, construction site applications, project performance, and new design practices. Leading-edge technology will be displayed at the Trade Expo. For more information or to register call (970) 879-3010 or email at [ecinfo@ieca.org](mailto:ecinfo@ieca.org).

## Interesting Websites

1. <http://www.wcc.nrcs.usda.gov> – Access the publication *Stream Visual Assessment Protocol*. This 36-page guide is useful for landowners and farm operators who wish to evaluate local streams for water quality and habitat. Even those with little training and experience will find the guide useful.
2. <http://www.ctic.purdue.edu/core4> – Visit the Core 4 program and the Conservation Technology Information Center website. The Core 4 program promotes conservation tillage, crop nutrient management, conservation buffers, and weed and pest management.
3. <http://www.epa.gov/owow/watershed/index.html> – Click on outreach to access graphics from *Getting in Step: A Pathway to Effective Outreach in your Watershed*. This is a guide that can be downloaded for your use.
4. <http://www.nris.state.mt.us/mtnhp> – Visit the Montana Natural Heritage Program website for information on animal and plant species of special concern.
5. <http://www.nris.state.mt.us/wis/wis1.html> – Visit FWP's Montana Rivers Information System. This is a database containing information on fish species distribution, supporting data distribution and stream information. Data includes fish population trend, spawning survey results and genetics information. Other stream or reach level data include angling use, fisheries resource classification, protected designation, stream channel conditions, and other data for over 4,5000 streams and rivers in Montana.

### **Save our Stream Program**

Save Our Streams (SOS) reached an important milestone in 1999 – 30 years of teaching citizens from all walks of life and all ages to be stewards of our nation's precious water resources. Founded in 1969, SOS is the grassroots watershed conservation program of the Izaak Walton League of America, one of the nation's oldest and most respected conservation organizations.

SOS has developed a variety of handbooks and videos about stream monitoring, habitat restoration, and wetland stewardship that are for sale. In addition, SOS sells the basic equipment needed to start a biological stream monitoring project. Through their toll-free technical assistance line (800-BUG-IWLA) and website ([www.iwla.org](http://www.iwla.org)), SOS staff help thousands of people learn how they can make a difference in the quality of their community watershed.